

REMARKS

The Applicants wish to thank Examiner Langel for the courteous interview extended to Applicants' Attorneys on September 15, 2004. Examiner Langel has suggested that the Applicants file an RCE so that the French Patent (No. 2686101) may be translated and considered against the amended claims. Examiner Langel has indicated the other references cited in previous Office Communications do not defeat patentability alone, or in combination. The Applicants therefore do not repeat their arguments with respect to the previously identified references including: British Patent No. 2058840, Japanese Patent No. 358060604, the article by Sato et al, U.S. Patent No. 6,508,996, and U.S. Patent No. 3,768,972.

The Applicants herein submit a Request for Continued Examination. The Applicants request that the presented amendments thus be entered and examined by Examiner Langel.

The Applicants maintain that none of the references cited by the Examiner, including the French Patent, teach or suggest a method of improving the toughness of a CBN product through the use of a specific combination of catalyst and oxygen getter.

Specifically, the Applicants have added limitations to Claim 1, so that the high temperature/high pressure process is conducted in the presence of a catalyst and an oxygen getter. The oxygen getter is selected from titanium, aluminum, silicon and mixtures thereof and the amount of oxygen getter in the blend is between about 0.005 and 0.5 wt %.

Applicants have amended Claim 23, wherein the oxygen getter comprises titanium, to include the presence of a catalyst and to include the amount of oxygen getter being between about 0.005 and 0.5 wt %. Claim 15 has been amended to depend from claim 1.

Claims 1-2, 9-11, 15, 23, 26 and 28 remain pending in the Application.

Claim Rejections Under 35 U.S.C. § 102(b) / §103(a)

The Examiner has rejected claims 1, 2, 8, 9, 11, 15, 20-24 and 26-28 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over French Patent No. 2686101 (the "French Patent"). Claims 3, 18 and 25 are rejected under 35 U.S.C. § 103(a) as obvious over the French Patent. Applicants respectfully request reconsideration of this rejection.

In maintaining his rejection over the French Patent, the Examiner relies heavily on the inherency doctrine. Under the inherency doctrine, the express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. §§ 102 or 103. However, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic.¹ “To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.’”² Inherency may not be established by probabilities or possibilities.

Here, it appears that while French Patent discloses a method which uses of a catalyst and an additive element of Al, B, Si, Zr or Ti, this method discloses the additive element as part of the catalyst system and not as an oxygen getter. The French Patent does not disclose the presently claimed percentage of reactants, catalyst and oxygen getter in the process of forming and improving the toughness of the low oxygen CBN. Therefore, since the amount of oxygen getter is not disclosed, the French Patent does not make clear that the resulting CBN crystals would inherently have improved toughness and low oxygen content as presently claimed. Since each and every process step of the present claims is not taught by the French Patent, the resulting product of the French Patent does not inherently possess all the claimed properties of the CBN product. The French Patent does not teach each and every limitation of the presently claimed processes, therefore, the inherency doctrine does not apply.

Additionally, the process taught by the French Patent does not render the presently claimed processes obvious. The “additive” of the French Patent is added to the catalyst and is linked to reaction yield. It is nowhere disclosed, suggested or implied that the “additive” of the French Patent is an oxygen getter in the amount of 0.005 to 0.5 wt% which is crucial for the resulting CBN product to have low oxygen content and improved toughness. One skilled in the art would only recognize that the presently claimed process would produce an

¹ *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art); *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981).

² *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999).

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improved toughness and low oxygen content CBN product from a reading of the present application, not from a reading of the French Patent.

CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that all pending claims as currently presented are in condition for allowance. Applicants respectfully request the Examiner to pass the case to issue at the earliest convenience.

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The Commissioner is hereby authorized to charge any additional fees which may be required for this submission, or credit any overpayment, to deposit account no. 50-0436.

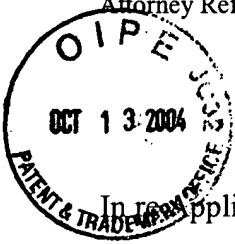
Respectfully submitted,
PEPPER HAMILTON LLP

A handwritten signature in black ink, appearing to read "Carissa Tener". The signature is fluid and cursive, with the first name "Carissa" written in a larger, more prominent script than the last name "Tener".

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CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.10

In re: application of

Michael H. Zimmerman et al.

Serial No.: 10/001,573

Filed: November 2, 2001

For: LOW OXYGEN CUBIC BORON NITRIDE AND ITS PRODUCTION

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Group Art Unit No.: 1754

Examiner: Wayne A. Langel

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